

AMENDMENT TO CLAIMS

1. (Original) A graft copolymer latex comprising:

a seed polymer including 1 to 15 parts by weight of one or more monomers selected from the group of vinylaromatic compounds, vinylcyan compounds, and compounds containing the units derived from methyl methacrylate, 0.01 to 0.5 parts by weight of a cross-linking agent, and 0.01 to 0.5 parts by weight of a grafting agent;

a core polymer including 20 to 70 parts by weight of an alkyl acrylate monomer, 0.1 to 1 part by weight of a cross-linking agent, 0.05 to 0.5 parts by weight of a grafting agent, and 0.05 to 2 parts by weight of a surfactant; and

a graft shell polymer including 20 to 60 parts by weight of a vinylaromatic compound, 10 to 30 parts by weight of a vinylcyan compound, and 0.05 to 2 parts by weight of a reactive surfactant.

2. (Original) The graft copolymer latex according to Claim 1, wherein said vinylaromatic compound is one or more kinds of compounds selected from the group of styrene, α -methylstyrene, para-methylstyrene, and vinyltoluene.

3. (Original) The graft copolymer latex according to Claim 1, wherein said vinylcyan compound is acrylonitrile or methacrylonitrile.

4. (Original) The graft copolymer latex according to Claim 1, wherein said alkyl acrylate is buthyl acrylate or ethylhexyl acrylate.

5. (Original) The graft copolymer latex according to Claim 1, wherein said reactive surfactant is one or more kinds of surfactants selected from the group of ionic and non-ionic reactive surfactants containing an allyl group, ionic and non-ionic reactive surfactants containing a (meth)acroyl group, ionic and non-ionic reactive surfactants containing a propenyl group, and their mixture.

6. (Original) The graft copolymer latex according to Claim 1, wherein said cross-linking agent is one or more kinds of agents selected from the group of ethyleneglycol dimethacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, 1,3-butanediol dimethacrylate, 1,6-hexanediol dimethacrylate, neopentylglycol dimethacrylate, trimethylolpropane trimethacrylate, and trimethylolmethane triacrylate.

7. (Original) The graft copolymer latex according to Claim 1, wherein said grafting agent is one or more kinds of agents selected from the group of allyl methacrylate, triallylcyanurate, triallylamine, and diallylamine.

8. (Currently Amended) A method of manufacture of dried power of a graft copolymer latex comprising the steps of:

~~manufacturing of a the graft copolymer latex including acrylic polymers composed of a step of manufacture of a seed polymer, a step of manufacture of a core polymer, and a step of manufacture of a graft shell polymer, wherein a reaction-type surfactant is used for a surfactant~~

~~when manufacturing said graft shell polymer~~ wherein the step of manufacturing of the graft copolymer latex comprises the steps of:

manufacturing a seed polymer by polymerizing 1 to 15 parts by weight of one or more monomers selected from said group of vinylaromatic compounds, vinylcyan compounds, and compounds containing the units derived from methyl methacrylate, 0.01 to 0.5 parts by weight of a cross-linking agent, and 0.01 to 0.5 parts by weight of a grafting agent;

manufacturing a core polymer by polymerizing 20 to 70 parts by weight of an alkyl acrylate monomer, 0.1 to 1 part by weight of a cross-linking agent, 0.05 to 0.5 parts by weight of a grafting agent, and 0.05 to 2 parts by weight of a surfactant; and

manufacturing a graft shell polymer by polymerizing 20 to 60 parts by weight of a vinylaromatic compound, 10 to 30 parts by weight of a vinylcyan compound, and 0.05 to 2 parts by weight of a reactive surfactant; and

manufacturing of ~~the~~ dried powder, wherein said graft copolymer latex manufactured in said step of manufacturing of the graft copolymer latex is sprayed and dried.

9. (Canceled)

10. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein said vinylaromatic compound is one or more kinds of compounds selected from the group of styrene, α -methylstyrene, para-methylstyrene, and vinyltoluene.

11. (Currently Amended) The method of manufacture of dried powder of the graft copolymer latex according to Claim 9 8, wherein said vinylcyan compound is acrylonitrile or methacrylonitrile.

12. (Currently Amended) The method of manufacture of dried powder of the graft copolymer latex according to Claim 9 8, wherein said alkyl acrylate is buthyl acrylate or ethylhexyl acrylate.

13. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein said reactive surfactant is one or more kinds of surfactants selected from the group of ionic and non-ionic reactive surfactants containing an allyl group, ionic and non-ionic reactive surfactants containing a (meth)acroyl group, ionic and non-ionic reactive surfactants containing a propenyl group, and their mixture.

14. (Currently Amended) The method of manufacture of dried powder of the graft copolymer latex according to Claim 9 8, wherein said cross-linking agent is one or more kinds of agents selected from the group of ethyleneglycol dimethacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, 1,3-butanediol dimethacrylate, 1,6-hexanediol dimethacrylate, neopentylglycol dimethacrylate, trimethylolpropane trimethacrylate, and trimethylolmethane triacrylate.

15. (Currently Amended) The method of manufacture of dried powder of the graft copolymer latex according to Claim 9 8, wherein said grafting agent is one or more kinds of agents selected from the group of allyl methacrylate, triallylcyanurate, triallylamine, and diallylamine.

16. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein the solid weight fraction of said graft copolymer latex manufactured in said step of manufacturing of the graft copolymer latex is 50 weight % to 70 weight %.

17. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein the total solid weight fraction of said graft copolymer latex in said step of manufacturing of dried powder is 50 weight % to 70 weight %.

18. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein a reactive surfactant and a non-reactive surfactant are mixed and used in said step of manufacture of the graft copolymer latex.

19. (Original) The method of manufacture of dried powder of the graft copolymer latex according to Claim 8, wherein the inlet temperature of drying gas during spraying and drying is 150 to 250°C.

20. (Currently Amended) Dried powder of said graft copolymer latex manufactured according to any of Claims ~~8 to 19~~ 8 and 10 to 19.

21. (Currently Amended) A thermoplastic resin composition including dried powder of said graft copolymer latex manufactured according to any of Claims ~~8 to 19~~ 8 and 10 to 19.